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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,304	01/23/2004	Shajan Mathew	IME03-011	6523

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EXAMINER

DANG, TRUNG Q

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/763,304

Applicant(s)

MATHEW ET AL.

Examiner

Trung Dang

Art Unit

2823

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 27 April 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).


4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☒ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

  
Trung Dang  
Primary Examiner  
Art Unit: 2823

Continuation of 11. does NOT place the application in condition for allowance because: With respect to Bai's reference, applicants argue that claim 1, clearly states that an amorphous silicon layer is deposited directly on an underlying conductive layer, wherein this same underlying conductive layer directly overlays the gate insulator layer. In contrast, the Bai prior art probably needed the oxide layer as a barrier to prevent consumption of the conductive layer during salicide formation wherein applicant's unique process featured consumption of an amorphous silicon shape directly on an underlying conductive shape without the use of an insulator barrier layer, without risk to, or consumption of underlying conductive material.

The Examiner respectfully disagrees. As disclosed in the reference, the barrier layer 206 is not limited to oxide but includes metallic materials such as titanium-nitride (TiN) and tantalum-nitride (TaN) (col. 4, lines 14-20). It is the metal layer 206 of TiN or TaN, not oxide 206, that the Examiner relied in the rejection to show anticipation of the claimed conductive layer. Accordingly, the amorphous silicon layer 208 is formed directly on the conductive layer 206 as depicted in Fig. 2A. As for applicants' argument that "this same underlying conductive layer directly overlays the gate insulator layer", it is noted that claim 1 calls for a step of forming a conductive layer on the gate insulator layer. This does not necessarily mean the conductive layer directly contacts the gate insulator layer, thus conductive layer 206 that is formed on the gate insulator 202 (Fig. 2A of Bai) reads on such limitation.

As for Chau's reference, applicants argue that the rejection of independent Claims 1 and 16, under 35 USC 103(a), as being unpatentable over Chau et al (US 5,625,217 B1), in view of Nguyen et al (US 6,084,279), taken with Bai et al, Deshpande et al, in view of Wiczorek, again no combination features an amorphous silicon shape formed directly on an underlying conductive shape which in turn directly overlays a gate insulator layer, wherein an amorphous silicon layer used to form the amorphous silicon shape is totally consumed during salicide formation. It is obvious the Chau prior art does not totally consume the amorphous layer overlying a conductive layer, therefore only forming metal silicide on an unconsumed portion of the amorphous silicon layer. Therefore the Chau prior art will not result in the low gate resistance and no polysilicon depletion obtained via applicants process in which all high resistance material is consumed during the silicidation procedure.

In response, as pointed out in the final Office action, it is noted that independent claim 1 was rejected as being unpatentable over Chau in view of Nguyen, and independent claim 16 was rejected as being unpatentable over Chau in view of Nguyen, Deshpande and Wiczorek, not Chau in view of Nguyen, taken with Bai, Deshpande, in view of Wiczorek as alleged by applicants. As for applicants' argument that Chau prior art does not totally consume the amorphous layer overlying a conductive layer, it is apparent that applicants argued on the basis of piecemeal analysis of the references. However, it is axiomatic that one cannot show nonobviousness by attacking references individually where the rejection, as here, is based on a combination of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). For example, applicants argue that Chau does not teach or suggest the claimed feature as mentioned above. However, the combined process of Chau and Nguyen, not Chau nor Nguyen alone, is employed in the rejection to show an amorphous silicon layer is formed directly on the conductive layer 504, and said amorphous silicon layer is totally consumed by the subsequent silicidation process. That is, Chau's reference is relied in the rejection to show the formation of the polysilicon layer 506 directly on the conductive layer 504. On the other hand, Nguyen's reference, not Chau, is relied in the rejection to provide logical reason as to why one skilled in the art would be motivated to make the proposed combination of references as noted in the rejection to arrive at the claimed invention. Thus, the claims are met by the combined teachings of the references, not by a single reference as alleged by applicants. For claim 16, again, the claim is met by the combined teachings of the references as clearly addressed in the rejection, not by a single reference as alleged by applicants.